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Iowa Agriculturist

George White
Iowa State University

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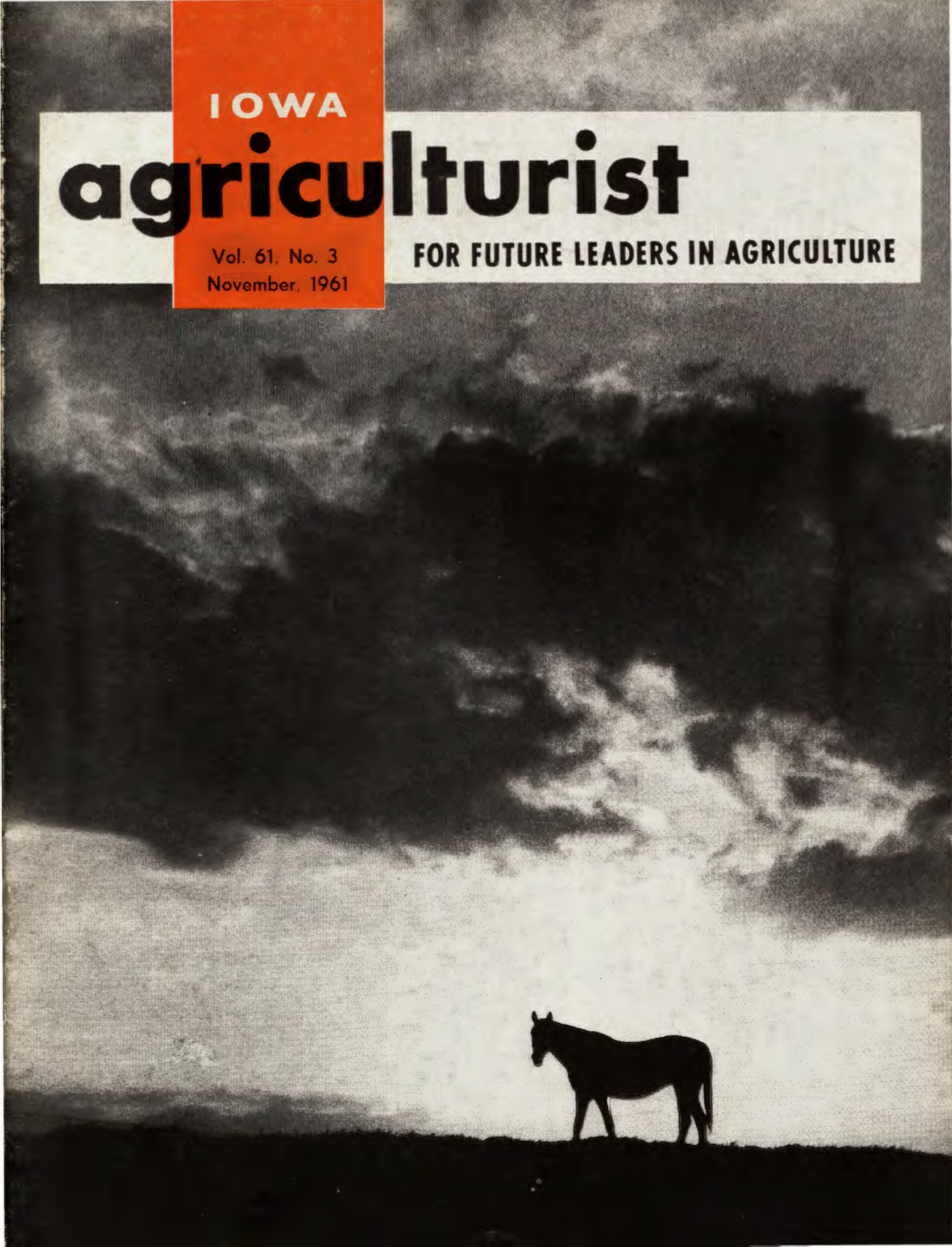
FOR FUTURE LEADERS IN AGRICULTURE



I chose a career, not a job!

by Pete Vossos

"I found a satisfying job right from the beginning —and more important, American Oil is diversified enough to offer varied opportunities for the future."

Peter Vossos earned his Master of Science degree at Iowa State, '58. As a physical chemist, Pete's immediate project is studying fundamental properties of asphalts with the objective of improving their performance in roofing and industrial applications. About his 2½ years at American Oil, Pete adds, "This is a company that's big enough and dynamic enough to be doing important work, but not so mammoth that you get lost in the crowd."

Many ambitious and talented young scientists and engineers like Peter Vossos have found challenging careers at American Oil. Their choice could have special meaning to you. American Oil offers a wide range of research opportunities for graduate chemists, chemical engineers, mechanical engineers, physicists, mathematicians and metallurgists.

If you are interested in a career with the Research and Development Department of American Oil Company, write to: D. G. Schroeter, American Oil Company, P. O. Box 431, Whiting, Indiana.

IN ADDITION TO FAR-REACHING PROGRAMS INVOLVING FUELS, LUBRICANTS AND PETROCHEMICALS, AMERICAN OIL AND ITS ASSOCIATE COMPANY, AMOCO CHEMICALS, ARE ENGAGED IN SUCH DIVERSIFIED RESEARCH AND DEVELOPMENT PROJECTS AS:

New and unusual polymers and plastics • Organic ions under electron impact • Radiation-induced reactions • Physiochemical nature of catalysts • Fuel cells • Novel separations by gas chromatography • Application of computers to complex technical problems • Synthesis and potential applications for aromatic acids • Combustion phenomena • Solid propellants for use with missiles • Design and economics: New uses for present products, new products, new processes • Corrosion mechanisms • Development of new types of surface coatings.

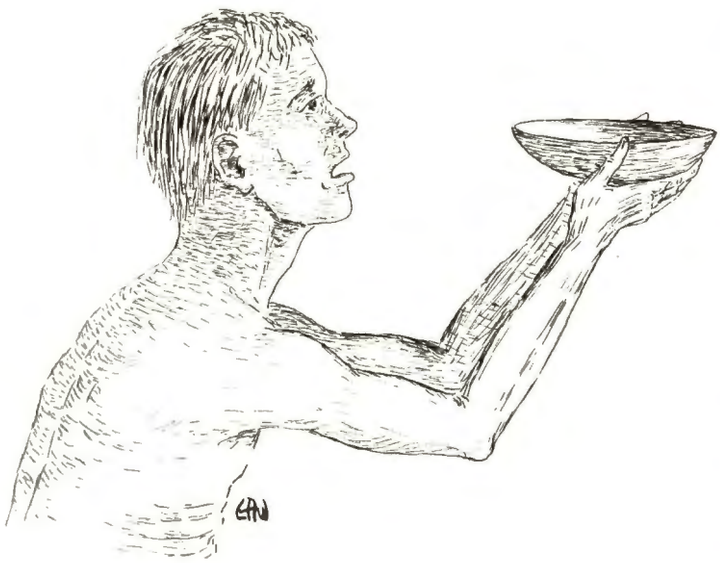
STANDARD OIL

DIVISION OF AMERICAN OIL COMPANY

NATIONAL MARKETING AFFILIATE OF STANDARD OIL COMPANY (INDIANA)

Our Farm Surplus— Strategic Defense Weapon?

THE KENNEDY ADMINISTRATION is trying to get rid of "surpluses" without actually reducing supplies. They are trying to change the public attitude toward our vast farm production.



Secretary of Agriculture Orville Freeman has said in speeches across the country that our farm stockpiles are not surpluses, but rather an abundance. He said that this abundance is valuable to us in our foreign aid programs and as a deterrent to war.

New York Governor Nelson Rockefeller echoed Freeman's viewpoint just last month when he said that Russia doesn't have the food supply to "keep alive" in case of a nuclear war.

George K. Davis, director of nuclear activities at the University of Florida, has said that Khrushchev knows that our reserve food supply gives us the means of maintaining ourselves in case of a nuclear war. Our food stockpiles are cheap protection — maybe cheaper than the billions invested in military spending.

Freeman said we have failed to fully appreciate the power and utility which agriculture gives us in a world of crisis and conflict.

The communist nations with their food storages realize that to people who are really hungry — bread and milk at hand are more important than a star in the sky.

And today there are plenty of people who are looking for bread and milk. For example the average person in India consumes barely 2,000 calories per day. Compare this to the average of more than 3,200 calories consumed per day by the average American.

Freeman said that "I sincerely believe that our future and the future of freedom depends in a large measure on the success of our program for foreign aid. As a part of that program, food can be a dramatic and effective force for peace and freedom." — *White*

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agriculturist

Vol. 61 NOVEMBER, 1961 No. 3

Table of Contents

Publication Board: Wm. F. Kunerth, faculty adviser, C. R. Elder, J. A. Browning, George White, John Rooks, Lee Aldrich, Bill Berkland. ● Member of Agricultural College Magazines, Associated. ● Published monthly except June, July, August and September by students in agriculture at Iowa State University. ● Entered as second class matter at Ames, Iowa, Post Office. Subscription rate: 1 year, $2.00; 2 years, $3.00. ● Littell-Murray-Barnhill, Inc., 369 Lexington Ave. New York 17, N.Y.

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OUR COVER

Horses are returning to the American scene. Riding horses such as the one silhouetted on the cover are becoming increasingly popular as Americans have more leisure time.

Iowa Staters' are enjoying the old-time sport of horseback riding.

Horses Are Back In the Picture

HAVE YOU TAKEN your best girl horseback riding lately? If so you joined hundreds of other Americans who try horseback riding in their free time.

This increased use is causing horse numbers to climb again after reaching an all-time low, says James Kiser, professor of animal husbandry. There are about 3.5 million horses in the United States today. In 1959 when the low was reached, the U. S. horse population was 3 million compared to 21.5 million in the peak year of 1918.

The light horses such as the quarter horse and the Shetland pony have the greatest popularity today. They make up 90 percent of the total of 3.5 million U. S. horses. With more leisure time, Americans have turned to these pleasure horses for recreation.

Much of the increased interest has come about through the support and enthusiasm of the horse associations. They promote many breeds of horses through shows, races and meetings. The quarter horse shows have almost tripled in the last few years, says Gordon Reisinger, A. H. 4. This breed has shown the largest increase in numbers.

Reisinger, who has been raising Shetland ponies for several years, says that Shetland pony numbers have also increased. There are now about 8,000 in Iowa. He points out that the average person can now afford to get a Shetland. Ponies were selling for $500 apiece a couple years ago, but a good mare now sells for only $125-200.

To meet the public's demand

Extension Changes With The Times

By Jim Grunig

Less emphasis on production, More interest in urban work

"A DYNAMIC SELF-HELP program" is one way of describing today's Extension Service.

This label of Extension policy was given by C. R. (Dutch) Elder, Iowa State Extension editor. He says that Extension must adjust itself to the needs and wants of the people.

Doing what people want is essential if Extension is to continue in the future, Elder says. Throughout its 57 years of existence, Extension has gradually changed its methods as the needs of the people have changed. Indications are that Extension will continue to change with the times.

Iowa farmers and Iowa educators were the first to undertake pioneer Extension work. In 1903 Dr. Seaman A. Knapp, Iowa State's second president, supervised a farmer-conducted farm demonstration near Terrell, Texas. Knapp had pioneered research and teaching at Iowa State previous to this time. He had been hired by the U.S.D.A. to help the southern farmer fight the boll weevil.

Farm Requested

In the same year, Iowa farmers near Hull in Sioux County requested a county demonstration farm. When this farm was organized, it was supported by county funds and was conducted in full cooperation with Iowa State and included support from the U.S.D.A.

By 1910 demonstration work was being carried out by 450 agents in 455 counties in 12 southern states. Extension work had also spread into many northern states much like it did in Iowa. Pressure was then put on the Federal Government to support the expanding program. The result was the Smith-Lever Cooperative Extension Act of 1914 which provided federal support of state extension services and also put them under control of the U.S.D.A.

A major impetus for the early Extension work was the food needed in World War I. It was during this period that Extension agents were provided in practically every Iowa county.

Associate Director of Extension Marvin A. Anderson says that the principal job of the early county agent was to move among the farmers and spread new ideas. The biggest problem the agent had was to sell himself. At that time many persons were somewhat suspicious of anyone with a college education.

The Extension Service has been traditionally concerned with helping the farmer produce more efficiently until today the farmer has become the most efficient producer of food and fiber in the world. Changes which have taken place in agriculture have led to a re-appraisal of the function of Extension. Some of these changes are better farm living conditions, higher education level of farmers, a population shift from rural to urban, and others. This means that not all farm boys can return to the farm, but that some have to enter an agri-business or other urban field.

Production De-emphasized

However, Extension has changed to meet these new demands. In general, production techniques have been de-emphasized, and the complexities of modern society and economy have been emphasized. Dr. Anderson labels the modern Extension worker as an "architect of informal education." Education is the principal function of Extension. Extension is a branch of the College of Agriculture here at Iowa State. It is supported financially from three levels – federal, state and county.

Public affairs is a field into which Extension is moving more and more. This involves showing the people where they stand in community, national and world affairs.

The change of direction has also influenced the 4-H program of the Extension Service. Today's 4-H'er learns more than how to care for livestock. The project used to be the only goal towards which a member worked, or it was an end in itself. Today the project is considered a means to an end. Today's 4-H'er learns leadership, management, business practices, public affairs, and perhaps a dash of psychology. The Extension Service realizes that not all 4-H members will stay on the farm, so 4-H'ers are introducted to careers in agri-business and other urban occupations.

Increasing Urban Work

The increased urban work done by Extension is also reflected in the 4-H clubs. According to the 1960 Annual Report for Iowa Extension, of the 54,286 4-H members in Iowa, 5,520 were from urban areas and 5,129 from rural non-farm areas. Rural enrollment decreased from 44,425 in 1959 to 43,637 in 1960. However, both rural non-farm and urban enrollment increased.

Now the Extension worker must spread "bundles of technology." Dr. Anderson gives an example of this in corn production. Not only must the farmer know fertilization methods, but he must know improved planting methods, weed control, fertilizer use, pest control, conservation, harvesting methods, and many others. Thus today's Extension worker must have a broader knowledge of the entire field of agriculture.

The modern farmer has risen to a higher education level, and he wants to know why technology works. A program entitled "Practice with Understanding" is an example of the work Extension does to show the farmer "why." Last year formalized short courses in Agronomy and Animal Husbandry were given to selected farmers throughout the state. Dr. Anderson says that farmers from three-fourths of the state received this training. The courses were of college level, and when the farmers were tested following the course, they scored higher and better than did Agronomy seniors on the same test.

According to Dr. Anderson, the second function of Extension is management. "Management is the pay-off for technology," Dr. Anderson said. He said that last year 2,000 beginning farm couples were taught management methods which stressed both farm and home development.

Most of the Extension work in "human development" revolves around the 4-H program. Dr. Anderson emphasized that the stress in 4-H work is now being put on the development of the individual.

50,000 in "Future Series"

Information was spread last year in a program called "The Iowa Future Series." Dr. Anderson said 50,000 adults participated in this program in which study groups were formed to find what their part in the community and the world really was. They met once a week during one month. Discussion material was provided by the Extension Service. The topics studied were: "What Does Economic Growth Require?" "Prospects for Agriculture and Main Street," and "Prospects for Families and Communities."

Encourages Industry

Elder says that the group works to bring new industries to the city and to improve the city by encouraging such programs as sewer and park development.

Extension administrators say, that Extension is being assigned new jobs every day. An example of this is a suggestion being made by Prof. James Schwartz, acting head of the Technical Journalism Department. Schwartz suggests that a state specialist be appointed to work with small-town newspapers to improve them both financially and content-wise. He says that newspapers are the principal means of spreading information, and if they are improved, information reaching the people will also be improved.

Many believe that even more urban work is in Extension's future. This may include such projects as helping a factory worker adjust to his job.

Dr. Anderson says that many feed companies, farm magazines, and corporations today provide much of the same information as Extension, but that this will not drive Extension out of existence. He says that extension is still the only source of unbiased information.

Elder also points out the fact that Extension work can provide a stepping stone to a related field. Feed companies, farm management firms, and other agri-business occupations want workers with Extension experience.

Degrees Helpful

He points out that advanced degrees are becoming more important in Extension work. He said that many state specialists and County Extension Directors have Masters and Doctors degrees.

Extension people, generally agree that a prospective Extension worker should take more courses in psychology, sociology, educational methods, and communicative skills, both writing and speaking.

Anderson said that most Extension workers have majors in Animal Husbandry, Agronomy, Farm Operation, Agricultural Economics, Dairy Husbandry and Agricultural Education. He summed up the possibilities in Extension by saying, "This is a field in which every student in agriculture should get more information."

Extension Weed Specialist E. P. Sylwester discusses weed identification at a field day. Demonstration, one of the first techniques used by Extension, is still valuable today.

This beef specialist selects carcasses in a packing plant to fill a specific quality order from a retailer. Experience gained from meats courses and judging work gives some Iowa Staters valuable training for such jobs.

Technical training helps in

Processing the Meat We Eat

by Ron Kiewiet

RAPIDLY CHANGING trends in meat merchandising, and new developments in processing, packaging, and distribution are creating more technical jobs in the meat packing industry, according to a leading meat packing company.

Specialization in areas such as research and product development and packaging design are providing more jobs for college trained personnel. A recent survey shows the meat industry is investing over $120 million dollars in new plants and equipment this year.

According to Russell M. Vifquain, agriculture personnell officer, many agriculture students automatically associate the livestock buyer with the packing plant. However, Vifquain says he believes students should "have their eyes open to the other opportunities" the packing plant affords.

Vifquain says sales is one of the most promising areas of employment in the packing industry. "If a young fellow can sell, within a few years, he can work up to an administrative position," he said. Vifquain says he doesn't believe students are antagonistic to sales work, but they may try to evade it at first. "Once they are in it, they usually advance rapidly," he said.

Earn-As-You-Learn

Most packing companies offer specific on-the-job training programs and development courses for new employees. These enable you to earn-as-you-learn and prepare yourself for positions of increasing responsibility.

Improved quality and new product uses stem from the laboratory work of chemists, physicists, chemical engineers and technicians. They study new uses for by-products of meat, dairy, and poultry products, fats, oils and protein by-products. College graduates with well-developed backgrounds are needed to fill these positions

In the purchasing department, employees are responsible for the procurement of materials such as glass, tinware, packaging papers and mechanical supplies and equipment. Economics majors would have a running start for rapid advancement in this department.

Since 1951, self-service marketing has developed into a prominent method of meat and food merchandising. Today it is unusual for a store employee to recommend a particular meat to Mrs. Housewife. The food package must convince her that the product will suit her family's needs and her budget.

Art, layout production, photography and copy department employees are needed to develop those new packing designs. Also, workers are needed in sales promotion material, publicity and general news presentations.

Animal husbandry graduates are needed in livestock buying departments. These departments are concerned with terminal and interior market buying. Special attention must be paid to weight apparising, grade, yield and the meatiness of each animal.

One company said its livestock trainees should have a rural background, have been a member of F.F.A. or 4-H, been a member of the college livestock or meats judging teams and ranked high in individual and group judging.

A dairy or poultry husbandry major can find opportunities in some packing companies which have dairy and poultry divisions. There are many opportunities in procurement, processing, packing and final preparation for distribution of dairy and poultry products.

Engineering departments in packing companies employ mechanical and industrial engineers for the operation, maintenance and construction of the plant, and for research and product development. There are occasional openings for electrical and architectural engineers. Test clerks, draftsmen and production managers are also needed.

Robert Rust, extension meat specialist, says even a mathematician can find a job in a packing plant. He said one area would be in the sausage making operation. Some companies have 50 to 100 formulas or more to make the same sausage product. Since a large volume of sausage is made each day, these formulas and the cost of all the ingredients are run into IBM machines to find the cheapest formulation for that particular day.

Demand Educated Men

What do packing companies look for in a potential employee to fulfill these positions? Viquain sums this up as an "educated man or women who is mentally, emotionally and socially mature."

He named a number of qualities that fall into this area; initiative, willingness to work, ability to make decisions, dependability, some experience in working with people, judgement and common sense, which he states as "doing the right things under the right conditions."

"Most packing companies try to find out if a student has worked up to his capacity," said Vifquain. He also added that a farm background is "invaluable."

You're probably wondering about the pay-scale. Vifquain said the average beginning wages in many companies varies with the degree you hold. He lists them this way: $400 to $425 per month with a B.S. degree, $500 to $525 per month with a M.S. degree, and with a Ph.D., $600 to $625 per month.

Ove Mattson says that American college students need better backgrounds for college work.

From Freshman To Graduate In 15 Months

By George White

LAST FALL Ove Mattson, was a first quarter freshman. This November he received his bachelor's degree in agronomy after only five quarters at Iowa State. Ove, who came to Iowa State from Radmanso, Sweden, graduated with a better than a 3.8 all college.

His first year at Iowa State was sponsored by Delta Upsilon fraternity, which furnished his board and room and part of his tuition.

Ove's "high school" background differs considerably from our traditional American education. He graduated from high school in Stockholm, Sweden, with five years of chemistry and the equivalent of math through calculus 212. He also had eight years of English, five years of German and three years of French in high school.

This unusual high school background enabled Ove to graduate in only five quarters by testing out of courses and by substituting high school credit for college work. Ove pointed out that his program was typical of the Swedish high school graduate.

However, he said, "This system is very different from yours. Only about 15 percent of the Swedish students graduate from high school." Most students complete what he termed 'first high school' at about 16. At this point, students are almost as advanced as American high school graduates.

But, he said Swedish high schools are more standardized. And high school students get much better backgrounds.

He commented that American students often have relatively poor backgrounds when they come to college. "Once you get to Iowa State you get good training, but you need better backgrounds."

Ove said that he had a terrible time with English at first. He had to use a dictionary all the time during his first quarter.

"Words don't necessarily correspond. I have an English vocabulary in agriculture, and I think in Swedish when I think about home. It is sometimes confusing," Ove said.

In Sweden grades are everything. Activities are considered of no value unless you're in sports or the president of an organization, such as the literature club. This is much different from the Iowa State attitude of stressing activities as well as grades.

The philosophy of American education is, in general, different from the Swedish system. One of the things he noticed, in particular, was the attitude of the instructors.

He said that in Sweden the instructor is always right. He never admits that he is wrong. If he can't answer a question in class, he doesn't admit that he doesn't know the answer. He says that "We'll take this up tomorrow since we don't have time today."

In Sweden the instructors remain aloof from the students. Ove liked our more personal system.

"I also like the quarter system. If you want to study, you can get more done. Being on the quarter system really helped me finish early."

Ove said that he enjoyed his stay in this country. "American traditions mean something to me now." American people were really friendly. "I was impressed with the hospitality."

He said it was interesting to see how Iowa girls behave. "At first I was embarrassed by the short skirts and shocked by the white socks and tennis shoes, but I got used to them." Swedish girls dress up more. They always wear high heels. Ove said that he is more impressed with graceful lines than with a lot of makeup.

No Women's Hours

He said that in Sweden the social attitude is a little bit different than in this country. College girls have no hours. Ove said that college students ought to be able to determine hours for themselves.

He said that he's played soccor, which is Sweden's national sport, ever since he could walk. Ove coached the Iowa State soccor team last year, and he played on the team this year.

Even though Ove has received his B. S. degree, he is starting over as a freshman at Uppsala University in Sweden. He said that he'll have to catch up with his Swedish classmates who are in the middle of a semester's work.

Ove said that he will probably spend a year at Uppsala studying chemistry. Then he hopes to come back to Iowa State to study soil or plant biochemistry.

Adjusted Quickly

Iowa State students and instructors have enjoyed Ove's stay here. His fellow students commented that he fits well into any situation. He can talk about almost anything to anybody.

One of the Delta Upsilon's commented that Ove took a lot of kidding at first about food and his different eating customs. But, he adjusted to American humor, and the guys got a big kick out of his comebacks.

A roommate said that Ove understood what he studied and picked out what was important. He used his time well. Ove was easy to get along with, and hard to offend.

Tom McIntosh, instructor in soils with whom Ove worked for about a year, said, "He is exceptional all the way down the line. He studied over and above what he was required to do. He was grade conscious and wanted to do well. But, he was more concerned with what he learned than with the grade he got."

McIntosh said "I think we'll hear more from Ove in the future, if he gets his fair share of the breaks. And knowing Ove he'll probably make a few of his own."

News for you from

The March of Agriculture

The Iowa Agriculturist won first place in the non-fiction writing contest sponsored by Sigma Delta Chi, Professional Journalistic Society, at the National Convention held in Miami, Florida. Larry Whiting, Ag. Jl. 4, wrote the winning non-fiction story entitled "George Washington Carver," which appeared in the March 1961 issue. George White, editor of the Agriculturist accepted the award at the convention.

• • •

Iowa State meats and nutrition researchers have completed a preliminary test designed to study the effect of different feeding programs on producing beef that fits more exactly the market demands for leanness and tenderness. Six lots of cattle were put on full feed at different times throughout the experiment. The lot that went on full feed immediately produced the most tender beef. Fat cover over the rib eye was about the same in all lots at the time of slaughter.

• • •

Seniors should take a look into the future at the job interviews for December. The two interviews are as follows:

December 6 — American Hospital Supply Corp., Evanston, Ill., R. V. Seamen, Jr. 8:00 a.m. Sign up at Marston Hall, Room 106, during the week of Nov. 29–Dec. 6.

December 15 — Food and Drug Administration, Kansas City, Mo., Andrew M. Allison. Check bulletin board near 121 Curtiss for time and location.

• • •

Milk is one of the best protectors we have against radioactive fallout, according to A. R. Porter, Iowa State dairyman. He said that Dr. George K. Davis, director of nuclear activities at the University of Florida, reports there has been extensive release of data and publication on radioactivity in milk because fallout can easily be measured in milk. Because of such reports, milk has been getting a black eye as a food material. There should be no alarm because animal products, such as milk, meat, and eggs are generally safer than vegetables. Porter said that dairy cows and chickens actually act as screens against strontium-90 accumulation.

• • •

Average composite farm wage rates of all hiring arrangements reached $0.84 per hour on October 1st of this year, according to the Crop Reporting Board. This is an increase of 3 percent above October 1st of last year. The number of hired workers remained about the same as last year at 2.8 million.

Both Farms and Farmers Change

by Larry Anton

IS THE FARMER any less of an individualist now than he was 200, 50, or even 10 years ago? "The farmer never was as economically independent as he thought he was," according to Dr. John T. Schlebecker, professor of history. "He isn't a socialist, but he wants to use whatever will work for him. If private enterprise will do the job, fine! If it takes cooperative or government intervention this is also fine. And he doesn't feel that this destroys his individualism."

The early American farmer was practically self-sufficient, from his clothes on his back made from homespun to the shoes on his feet and seeds for his crops. For cash he sold his cattle to drovers on their way to Cincinnati or New York. His corn, turned into whiskey, was easy to handle and sell.

The rugged man of the forest and prairie with his double-bitted ax and sod-busting plow can be found only in our history books. In his place are farmer-business men who must decide when and where to sell their corn, sugar beets or cattle and still plow a straight furrow.

Eber Eldridge, associate professor of economics, points out that "most farm boys have traditionally expected to stay on the farm when they grew up." He also explained that farm size has increased and total investment costs have gone from $30,000 in the 1930's to over $110, 000 at the present time for farms in the Corn Belt cash-grain area. Thus fewer farm boys may return to the farm than in the past. To gain capital to farm under such requirements usually requires considerable non-individual help in the form of credit. The government, private enterprise and associations all work and are accepted by farmers in the area of farm credit.

A farmer's relative isolation gives him a certain independence. He feels more apart from the world around him than if neighbors were greeting him every time he stepped off the doorstep.

This relative isolation makes the farmer less subject to personal controls than is his city neighbor. On most farms any kind of house may be built without restrictions on size, price, lighting, drainage and lawn mowing.

The man living in the city lacks this kind of freedom.

Farmer Still Works

While our concept of individualism has changed, we can still live, work, travel and criticize as much as we want and can afford to. In the farmer we have a man, though no different from any other segment of our society, who still appreciates the value of hard work. He knows that extra time spent in critical periods can not be measured alone in dollars and cents if the harvest is finished. At the same time he knows that a bill in Congress or merely a memorandum from some bureaucrat's desk may affect his farm business future more than anything he can do alone.

The man on the farm isn't the individualist he was 200, 50 or even 10 years ago, but neither are the rest of us – professor, student, laborer, or professional man.

Today's farmer can not afford to be alone. He uses products from all over the world. Because of the level of technology developed through farm and industry, North America has 70 percent of the world's food reserves.

by Larry Whiting

A Little Ribbin' from Your Typewriter

LET ME CLUE you in. Typewriters as well as students welcome quarterbreak. During the last few days of each quarter it's the same old rat-race. I gather dust for weeks and then you come tearing in, shaking the dust off me, and pound away on your term papers. My carriage has been flipped so many times that I can't tell whether it's coming or going.

What you need is some sound advice. Why don't you get organized? Since I have been under your hands, I've never once typed a list of material sources. You say it takes too much time. A good list would save us both hours. It should include books, magazine articles, possible interviews, government reports, and much other information. It is as essential to you as my paperguide is to me. Such a list would start you out systematically. The sources of information are the backbone of your report.

Why can't you learn to take accurate notes when looking through source materials? Indicate the source used for each item so when you're preparing your footnotes and bibliography you will have everything you need.

It's always better to have more information than you need than not enough. However, there are certain limits. I don't like to have books piled over me, under me, and to ungodly heights around me. They tend to block my view of life.

What About Outlines

What have you got against outlines? With an outline you would know where you have been and where you are going with the report. It should not become so detailed that it becomes an inflexible tool.

Only another typewriter knows how it itches to have eraser fuzz falling all over me. When will you get wise and make all corrections on a rough draft? I shudder when I am forced to print a comma when my better judgment and intelligence tells me it's not needed. I repeat: check punctuation and grammer in your rough draft. It will give you a preview of what your finished report will look like and an estimate of the length.

You constantly bungle footnotes. You should acknowledge information written or said by other people. The major requirement of a footnote is to have all the necessary facts in some consistent form throughout the report. Information such as the title, author, volume number, (if there is more than one volume), and the page number locating the page should be included.

When my ribbon is worn out, I feel completely washed out. With a good typewriter ribbon I can do wonders making every word stand out so it can be easily read. Then I can give your term paper a professional appearance.

Check for Errors

When you finish a page, check it over for errors and make final corrections before ripping out the page. It's not my fault when you maliciously spin a typed page under my roller and can't get everything lined-up as before. Though we've gone from the machine age to the space age you could still give me more consideration.

I suppose I've commented enough for today. I'll not likely get oiled for months. My bell is clanging, I feel like I have a malignant margin release, and my line spacer is wayward.

Boy, could I use a tranquilizer.

P.S. Hope we are still friends.

Your faithful friend,
An abused typewriter

Laugh A While

Husband: "Well my dear, I have carried you safely over all the rough places of life haven't I?"

Wife: "Yes, and I don't think you missed any of them."

* * *

It is said that love begins when she sinks into your arms and ends with her arms in the sink.

* * *

Judge: (To husband whose wife is just awarded a divorce) "And I have decided to give your wife 75 dollars a month."

Husband: "That's fine judge. I'll try and slip her a few bucks once in awhile myself."

* * *

Professor: "Young man, do you know who I am?"

Freshman: "No sir, but if you remember your address, I'll take you home."

* * *

First moron: "How did you get that cut on your head?"

Second Moron: "I bit myself."

First Moron: "That's impossible. How could you bite yourself up there?"

Second moron: "I stood on a chair."

* * *

Her: (at Penney's store) "Can't you show me something shorter in skirts."

Clerk: "Sorry miss, that's the shortest we have in the store, but you might try the collar department, third aisle down."

* * *

Prof: "Did you write this unaided?"

Student: "I did."

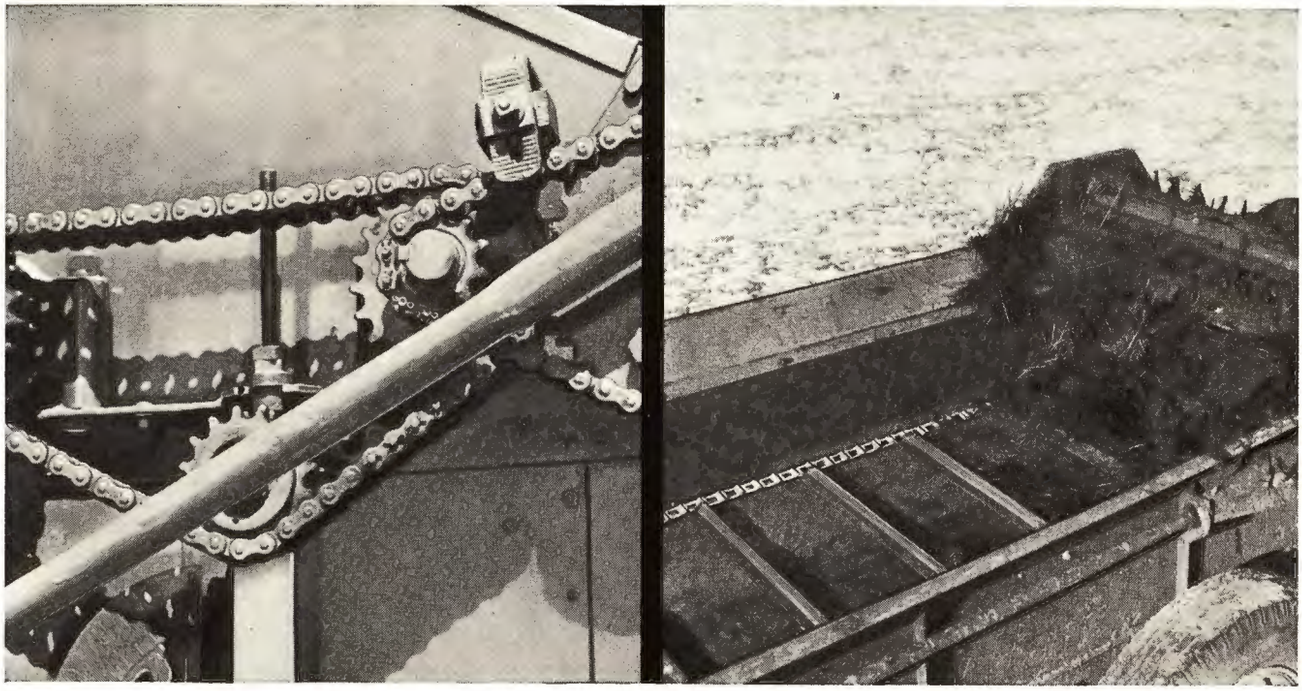
Prof: "Then I am very pleased to meet you, Lord Tennyson. I thought you died years ago."

* * *

Fraternity man: "I want my pin back!"

Coed: "Well, come over and pick it out."

transmitting power ... or conveying



nothing does it like chain

...and for more than 300 farm machine manufacturers, nothing does it like LINK-BELT chain

Chain adds substantially to the reliability of farm equipment drives and conveyors. For day-in, day-out service, nothing can match its strength and endurance . . . its *positive* efficiency.

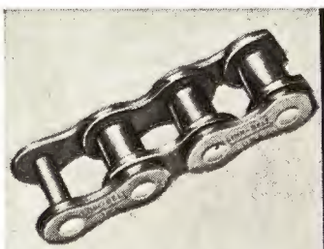
Today, over 300 farm machine manufacturers obtain this reliability from Link-Belt. Experience has shown them that chain marked with the double-arrow >—< trademark is made to highest farm machine standards . . . has consistent quality and unvarying pitch uniformity in every link . . . will maintain rated performance and efficiency on their machines.

Link-Belt offers industry's *most complete* line of drive and conveyor chains, chain attachments and sprockets. Also "bonus" services that aid the designer, improve the design: application counsel, field analysis, laboratory service and others. These services multiply the *value* of Link-Belt chains, *but not the price!*

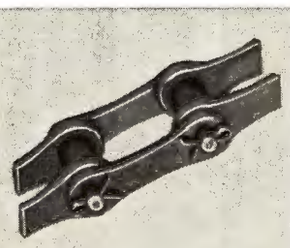
LINK-BELT

CHAINS AND SPROCKETS

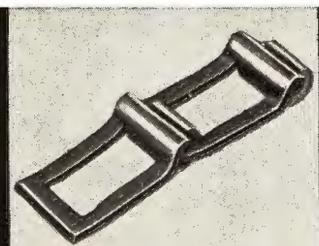
LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Warehouses, District Sales Offices and Stock Carrying Distributors in All Principal Cities. Export Office, New York 7; Australia, Marrickville (Sydney); Brazil, Sao Paulo; Canada, Scarboro (Toronto 13); South Africa, Springs; Switzerland, Geneva. Representatives Throughout the World. 15.71d



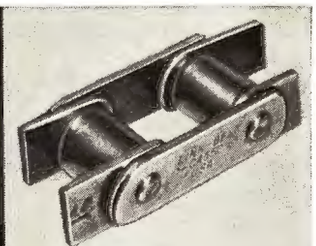
***STANDARD-PITCH PRECISION STEEL ROLLER CHAIN** — popular choice for transmitting power on such equipment as self-propelled combines. Features high-hp capacity and light weight.



***DOUBLE-PITCH AGRICULTURAL ROLLER CHAIN** — a light weight, economical roller chain having all the precision features of standard roller chain. Ideal for long center drive and conveyor applications.



STEEL LINK-BELT CHAIN — brings low-cost efficiency to elevating and conveying applications. Wide range of attachments available. Open hook design simplifies coupling and uncoupling.



***A550 ROLLER CHAIN** — for drives and conveyors. This durable chain is the economical choice for applications where loads and speeds exceed those recommended for steel Link-Belt.

★**IMPORTANT!** Link-Belt roller chains for the agricultural field are *true* roller chains. They have free-turning rollers. Hence, longer life for chain and sprocket because there's no scrubbing or sliding over sprocket teeth.

A brief report on how Pioneer geneticists develop better corn —

Unique Test Helps Pioneer Breeders Boost Lodging Resistance of Corn

When natural stresses aren't severe enough to test lodging resistance, Pioneer breeders apply their "stalk-yanking" test

To test stalk and root lodging resistance of inbred lines of corn, Pioneer corn breeders create tough conditions.

They plant these inbred lines of corn at higher-than-normal populations in disease and insect-infested soil. Often, these conditions plus weather stresses — drouth or excess rain, and wind — separate the weak from the strong plants.

Occasionally, nature doesn't provide a strict enough test. Most of the plants may be left standing. This is a tip-off to the corn breeders that they need to apply their own tests. These tests help them eliminate the plants that are weak in stalk or root strength.

So the breeders walk down the rows, grasping each stalk near the ear and giving it a sharp tug with a sidewise motion to put strain on the stalk. With experience, each man learns to apply about the same force to every plant. While this step doesn't provide an exact measure of lodging resistance, it guides the breeder in his selections of individual plants.

At each of Pioneer's 13 breeding stations, plant breeders apply hard work, sound judgement, long experience, and training to the task of learning more about corn . . .

Pioneer Hi-Bred Corn Company, Des Moines, Iowa

PIONEER® CORN

to improving its profit-making ability. You can measure their success by this fact: *Iowa farmers plant more Pioneer corn than any other kind.*

Corn breeding stations at Willmar and Mankato, Minnesota; Algona and Johnston, Iowa; York, Nebraska; Princeton, Illinois; Tipton and Princeton, Indiana; Yellow Springs, Ohio; Middletown, Delaware; Union City, Tennessee; Cottonwood, Arizona; and Homestead, Florida.